

CLAIMS

What is claimed is:

1. An integral plastic and metal part comprising;
a metal component having a first opening therein;
a plastic component disposed about at least a portion of said metal component,
said plastic material extending through said first opening and including a flange on one
side thereof for securing said plastic component with said metal component.
2. A part as set forth in claim 1 wherein said first opening is defined by
edges, said flange extending outwardly of said edges on one side of said first opening
and said plastic material extending beyond said edge on the opposite side of said
opening.
3. A part as set forth in claim 1 wherein said flange is annular.
4. A part as set forth in claim 1 wherein said flange is rectangular.
5. A part as set forth in claim 1 wherein said plastic part includes ribs.
6. A part as set forth in claim 1 wherein said metal component comprises a
closed cross section.
7. A part as set forth in claim 6 wherein said metal component includes a
second opening thereon.

8. A part as set forth in claim 7 wherein said second opening is disposed on said metal component opposite said first opening.

9. A part as set forth in claim 1 wherein said edge of said first opening is curved.

10. A part as set forth in claim 9 wherein said flange extends beyond said curved edge of said first opening.

11. A part as set forth in claim 7 wherein said second opening is defined by a second edge in said metal component, said second edge being folded.

12. A part as set forth in claim 1 wherein said plastic part includes attachment holes therethrough.

13. A part as set forth in claim 1 wherein said first opening comprises a series of openings.

14. A method of attaching a plastic component to a metal component comprising the steps of:

providing a metal component having a first opening therein;

placing the metal component in a die;

positioning a tool on one side of the first opening; and

molding the plastic component about at least a portion of the metal component and through the first opening, such that plastic component forms a flange on one side of the first opening for securing the plastic component with the metal component.

15. A method as set forth in claim 14 wherein the first opening is defined by an edge and said method further comprises curving the edge.

16. A method as set forth in claim 14 wherein the metal component comprises a closed cross section.

17. A method as set forth in claim 16 wherein said metal component includes a second opening defined by a second edge.

18. A method as set forth in claim 17 further comprising bending the second edge of the metal component.

19. A method as set forth in claim 17 further comprising positioning the tool on one side of the first opening by inserting the tool through the second opening.

20. A method as set forth in claim 14 further comprising molding ribs into the plastic component.

21. A method as set forth in claim 13 wherein the flange extends beyond the edge of the first opening.